



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,482	09/02/2003	Tomohiro Sakai	NE304-US	2052

21254 7590 03/19/2007  
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC  
8321 OLD COURTHOUSE ROAD  
SUITE 200  
VIENNA, VA 22182-3817

EXAMINER

MASKULINSKI, MICHAEL C

ART UNIT PAPER NUMBER

2113

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/652,482

Applicant(s)

SAKAI, TOMOHIRO

Examiner

Michael C. Maskulinski

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-10,12-14,19-21,23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 2,4,5,11,15-18,22 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**Final Office Action**

***Drawings***

1. The drawings were received on December 28, 2006. These drawings are accepted by the Examiner.

***Claim Objections***

2. Claim 3 is objected to because of the following informalities: in lines 4-5, the Examiner believes that the claim language "were detached from the loop interface, from the other loop interface" should be changed to "were detached from the loop interface and from the other loop interface". Appropriate correction is required.

***Double Patenting***

3. Applicant is advised that should claim 8 be found allowable, claim 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 101***

4. In view of the recent amendments, the rejection of claims 8 and 27, under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, has been withdrawn.

***Claim Rejections - 35 USC § 112***

Art Unit: 2113

5. In view of the recent amendments, the rejection of claims 2-5, 7, 10, 12, 14, 15, 18, and 23, under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, has been withdrawn.

6. In view of the recent amendments, the rejection of claim 27, under 35 U.S.C. 112, fourth paragraph, as being an improper dependent claim, has been withdrawn.

***Response to Arguments***

7. Applicant's arguments, filed December 28, 2006, with respect to the rejection(s) of claim(s) 1-3, 6-16, and 19-27 under 35 U.S.C. 102(e) as being anticipated by El-Batal, US 2004/0153914 A1, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Beer et al., US 2007/0053285 A1.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, 6-10, 12-14, 19-21, 23 and 25-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Beer et al., US 2007/0053285 A1.

Referring to claim 1:

Art Unit: 2113

a. In paragraph 0063, Beer et al. disclose a first enclosure detecting a failing disk drive, which breaks both loops (detecting whether abnormalities occur in first and second loop interfaces which are multiplexed and to which devices are connected).

b. In paragraph 0065, Beer et al. disclose that once the disk drives are bypassed, both loops will come back up into operation; however, all the disk drives will be inaccessible (when the abnormalities are detected in both the first and second loop interfaces, detaching all devices connected to at least one of the first and second loop interfaces).

Referring to claim 3, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (performing a loop diagnosis for identifying a faulty device by accessing one of the first and second loop interfaces, in which all of the devices were detached from the loop interface and from the other loop interface).

Referring to claim 6, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (wherein a device determined as faulty in the loop

Art Unit: 2113

diagnosis is detached from the loop interface, and the loop interface is to be in use again).

Referring to claim 7, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (wherein the loop diagnosis for identifying a faulty device is performed by accessing disk controlling means connected to one of the loop interfaces via the disk controlling means connected to the loop interface which is in use again).

Referring to claims 8, 9, and 27, in paragraph 0090, Beer et al. disclose a computer program product for implementing the method.

Referring to claims 10 and 23:

- a. In paragraph 0040, Beer et al. disclose that each disk drive or SES device has a bypass circuit to enable it to be bypassed by the loop (first and second loop connection switching means for connecting and detaching devices to and from respective first and second multiplexed loop interfaces).
- b. In paragraph 0041, Beer et al. disclose that SES devices can be used to instruct a bypass of a disk drive and to check which disk drives are bypassed (first and second disk controlling means for controlling the first and second loop connection switching means).

Art Unit: 2113

c. In paragraph 0041, Beer et al. disclose that the two SES devices are connected together through the enclosure's backplane (a first communication means for transmitting and receiving data between the first and second disk controlling means).

d. In paragraph 0064, Beer et al. disclose that due to the fact that the SES devices are inaccessible the timeout commands from the adapter cannot be received and the SES devices will bypass all the disk drives in the first enclosure thereby creating complete loops bypassing all the disk drives (wherein the first and second disk controlling means each have, when detecting that abnormalities occur in all of the loop interfaces, functions of outputting to the first and second loop connection switching means instructions to detach all devices connected to either one of the first and second loop interfaces).

Referring to claim 12, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (wherein each of the first and second disk controlling means comprises loop diagnostic means for performing loop diagnosis to identify a faulty device by accessing the other loop interface via the first communication means and the other disk controlling means, devices connected to the other loop interface having been detached so that the detected loop abnormality has been resolved).

Referring to claim 13, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (wherein the loop diagnostic means detaches a device determined as faulty in the loop diagnosis is detached from the other loop interface to be in use again).

Referring to claim 14, in paragraph 0065, Beer et al. disclose that one of the adapters can find out which disk drive is at fault. A configuration manager can inform the adapter if an SES device is accessible via a certain loop and the adapter can instruct the SES device to un-bypass disk drives from the other loop to see which disk drive causes the loop to break (wherein the loop diagnosis means is arranged to perform loop diagnosis for identifying a faulty device by accessing the loop interface which is in use again).

Referring to claims 19 and 25, in paragraph 0037, Beer et al. disclose that the loop interface comprises a Fibre Channel Arbitrated Loop (FC-AL).

Referring to claims 20 and 26, in paragraph 0037, Beer et al. disclose that the devices comprise hard disk devices.

Referring to claim 21, in paragraph 0041, Beer et al. disclose that each of the disk controlling means (SES device) monitors abnormalities in a plurality of loop interfaces.



***Allowable Subject Matter***

10. Claims 2, 4, 5, 11, 15-18, 22, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter.

Referring to claim 2, the prior art does not teach or reasonably suggest informing the other of the first and second loop interfaces that the receptions have ceased.

Referring to claim 4, the prior art does not teach or reasonably suggest when the loop abnormalities were resolved in the certain period of time, inquiring disk controlling means whether they detached all of the devices.

Referring to claims 11 and 24, the prior art does not teach or reasonably suggest inform via the first communication means to the other disk controller means that receptions of the commands have ceased, and when detecting that receptions of commands have ceased in all disk controlling means, detect that abnormalities occur in all loop interfaces.

Referring to claim 15, the prior art does not teach or reasonably suggest wherein either of the first and second enclosure service means controls the loop connection switching means when abnormalities are detected in all of the loop interfaces so as to detach all devices connected to either loop interface.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Maskulinski whose telephone number is 571-272-3649. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael C Maskulinski  
Examiner  
Art Unit 2113